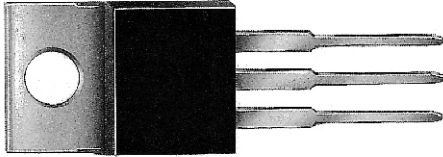


UF1000 thru UF1008

ULTRAFAST SWITCHING RECTIFIERS



**CHENG-YI
ELECTRONIC**



FEATURES

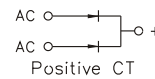
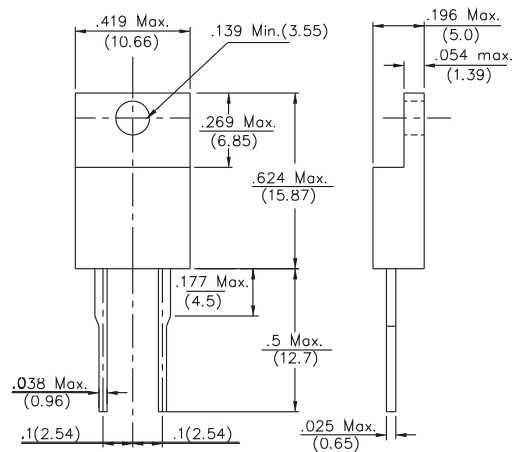
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228.
- Low power loss, high efficiency.
- Low forward voltage, high current capability.
- High surge capacity.
- Ultra fast recovery times, high voltage.

MECHANICAL DATA

- Case: TO-220AC molded plastic
- Terminals: Lead solderable per MIL-STD-202, Method 208
- Polarity: As marked.
- Mounting position: Any
- Weight: 0.08 ounces, 2.24 grams.

VOLTAGE RANGE
-50 TO 800 VOLTS
CURRENT
-10.0 Amperes

TO-220AC



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| TYPY NUMBER | UF1000 | UF1001 | UF1002 | UF1003 | UF1004 | UF1006 | UF1008 | UNITS |
|---|-------------|--------|--------|--------|--------|--------|--------|----------|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 300 | 400 | 600 | 800 | V |
| Maximum RMS Voltage | 35 | 70 | 140 | 210 | 280 | 420 | 560 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 200 | 300 | 400 | 600 | 800 | V |
| Maximum Average Forward Rectified Current .375"(9.5mm) lead length @ T _c =100°C | 10.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 150 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 10.0A | 1.0 | | 1.3 | | 1.7 | | | V |
| Maximum D.C Reverse Current @ T _A =25°C at Rated D.C Blocking Voltage @ T _A =125°C | 10 500 | | | | | | | μA μA |
| Maximum Reverse Recovery Time (Note 1) | 50 | | | | | 100 | | Ns |
| Typical Junction Capacitance (Note 2) | 80 | | | | | 50 | | pF |
| Typical Junction Resistance (Note 3) R _θ JA | 15 | | | | | | | °C / W |
| Operating and Storage Temperature Range T _j , T _{STG} | -50 to +150 | | | | | | | °C |

Notes : 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

2. Measured at 1 MHz and applied reverse voltage of 4.0V D.C.

3. Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm) P.C.B. mounted.

UF1000 thru UF1008

ULTRAFAST SWITCHING RECTIFIERS



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RATING AND CHARACTERISTICS CURVES UF1000 THRU UF1008

Fig. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

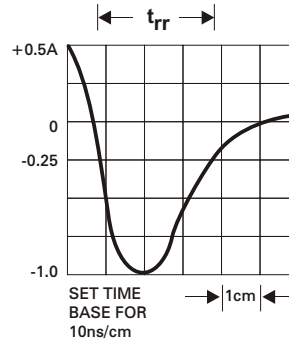
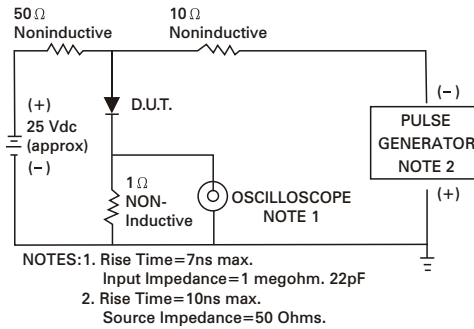


Fig. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

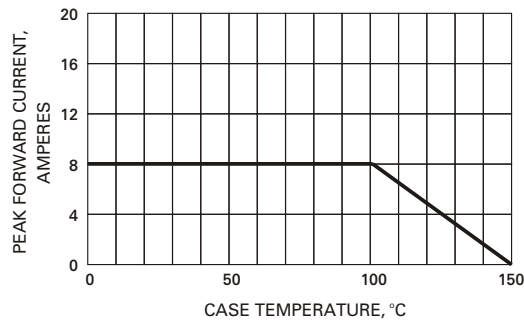


Fig. 2 - TYPICAL REVERSE CHARACTERISTICS

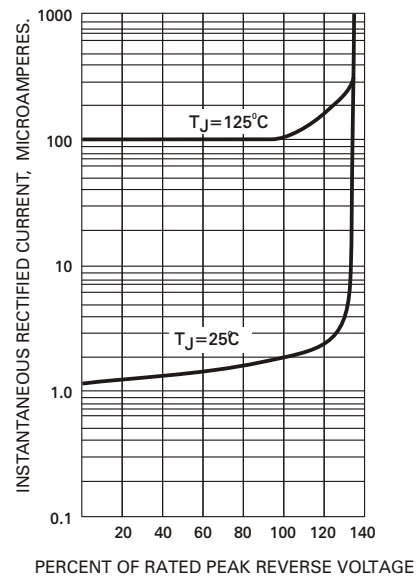


Fig. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

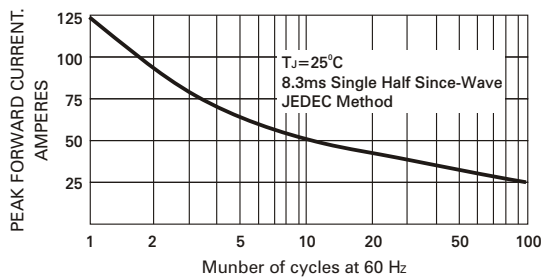


Fig. 5 - TYPICAL FORWARD CHARACTERISTICS

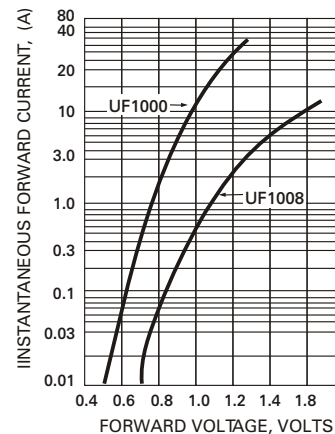


Fig. 4 - TYPICAL JUNCTION CAPACITANCE

